

REMARKS

This is in full and timely response. The above listing of the claims replaces all prior versions, and listings, of claims in the application. Reexamination and reconsideration in light of the proposed amendments and the following remarks are respectfully requested.

Status of Claims

Claims 1, 2, 5, 8, 14 and 15 are currently being amended.

Claims 3, 4 and 9-13 are currently being canceled.

No claims are currently being added.

This response amends and cancels claims in this application. A listing of the claims, along with their current status identifier, are included in this response.

Claims 1, 2, 5-8, 14 and 15 are presently pending for further consideration.

Rejections under 35 USC § 103

The rejection of claims 1, 3, 4, 8, 9, 11 and 15 under 35 USC § 103(a) as being unpatentable over Souri et al. in view of Millar, Jr., and the rejection of claims 2, 5-7, 10 and 12-14 under 35 USC § 103(a) as being unpatentable over Souri et al. in view of Millar, Jr. and further in view of Johnson, are respectfully traversed.

While Souri discloses the use of a Darlington pair in a circuit protection device, as shown in Figure 3A of that reference, the Darlington pair is configured to turn OFF when a surge of current occurs. This surge of current causes the positive coefficient temperature (PTC) resistor Rp3 to switch to a high impedance state, thereby operating as an Open Circuit along the path of the PTC resistor Rp3.

Thus, unlike the present invention (as recited in claims 1 and 2 and 8), in which a resistor with a constant resistance value that does not change is utilized with a Darlington pair, Souri uses a resistor that changes its value based on operating conditions.

Accordingly, since the other cited art of record does not rectify the above-mentioned deficiencies of Souri, independent claims 1, 2 and 8 patentably distinguish over the cited art of record.

Furthermore, Souri's Darlington pair 22, 26 as shown in Figures 3A and 3B of that reference are configured to turn OFF when a surge occurs. This does not happen in the present invention, which utilizes a Zener diode to shunt excess current to ground.

Independent claims 2 and 8 recite that the first and second transistors are maintained in an ON state irrespective as to an amount of current provided thereto, whereby these features do not exist in the system of Souri, as explained above.

Accordingly, since the other cited art of record does not rectify the above-mentioned deficiencies of Souri, independent claims 2 and 8 patentably distinguish over the cited art of record for this additional reason.

Still further, with respect to independent claims 2 and 8, while the Office Action turns to the Johnson reference to disclose the use of a Zener Diode 78, such a use of Zener diode would not be added by one skilled in the art to the system of Souri, since Souri's system already has a mechanism, that being the use of a PTC resistor that operates as an Open Circuit, and thus one skilled in the art would not be motivated to include a Zener Diode (as taught by Johnson) to the circuit of Souri, since it would serve no useful purpose. Johnson discloses that his Zener Diode 78 provides a voltage regulation function, and as such would be a redundant component to the circuit of Souri, which already provides a surge protection function by way of its PTC resistor.

Accordingly, independent claims 2 and 8 patentably distinguish over the cited art of record for these additional reasons.

Also, the statements made in the Office Action concerning the combining of Johnson with Souri and Miller is based on hindsight reconstruction of the claimed invention, which of course is an improper basis for rejecting the claims.

Lastly, Miller discloses the use of a diode at an input of his protection circuit, in order to provide protection against the transfer of excess of energy due to inadvertent application of reverse or wrong polarity on terminal 20 or terminal 22. See column 3,

lines 21-23 of Miller. Such a use of a diode at an input of a protection circuit as described in Miller has nothing at all to do with the use of a diode at an input of a surge protection circuit, as claimed, since it is not a reverse or wrong polarity that is to be worried about in the present invention, but rather a surge of voltage or current provided on a line to a device that is to be supplied with the voltage or current.

In any event, Miller does not rectify the above-mentioned deficiencies of Souri and Johnson, as explained above.

Accordingly, each of the presently pending independent claims is patentable over the cited art of record.

The presently pending dependent claims are patentable due to their dependency on either independent claim 1 or independent claim 2 or independent claim 8, as well as for the specific features recited in those dependent claims.

For example, with respect to dependent claim 7, the Office Action asserts, without pointing to any prior art reference, that it would be obvious to include a capacitor in the claimed surge suppressing circuit. Applicants respectfully disagree, and submit that the Examiner is applying hindsight reconstruction of the claimed invention, which is an improper basis for rejecting the invention. If the PTO is to maintain this rejection of claim 7, the PTO is respectfully requested to provide a prior art reference that shows the use of a capacitor in the manner claimed, and which would be combinable with the other references cited in the Office Action. Failing that, the PTO would be requested to withdraw the rejection of claim 7.

Conclusion

It is respectfully submitted that the claims as they stand before the PTO are allowable for at least the reasons advanced above. Favorable reconsideration and allowance of this application are courteously solicited.

Respectfully submitted,

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